Capital Improvement Connection to Student Cost at The Ohio State University Columbus Campus

By: Taylor Stepp

Undergraduate Thesis

April 2014

Introduction

The United States is facing a new debt crisis that could very well create economic bedlam in the years to come. In 2011 national student loan debt surpassed credit card debt as the single largest source of debt for Americans as the combined debt soared over one trillion dollars (Chopra, "Debt"). According to the Institute for College Access and Success, the average borrower will graduate with roughly $26,000 in debt. The cost of higher education is growing at an alarming rate in the United States. As noted by the Consumer Financial Protection Bureau, federal student loan debt surpassed $1 trillion dollars in July of 2013 and shows no signs of slowing down (Chopra, "Debt"). This amount of debt raises serious concern. This massive amount of debt might lead to major defaults on loans, similar to what happened in the housing market. There is concern by scholars that the higher education market could be the next major American market bubble, "the higher education and student loans markets are coming under new levels of scrutiny because they display many of the hallmarks of a bubble" (Macchiarola and Abraham, "Bubble"). The issue of student debt is a real concern with real consequences if it is not tackled, but before the issue is addressed, it is important to understand the cost of college. What is it that drives the cost of college? There are a variety of factors, but a few of the often-cited reasons include the race for prestige, staffing levels and decreasing government funding. Capital expenditures have seen a very large increase over the last three decades and oftentimes these expenditures are directly funded by students. This paper will conduct a case study of the past thirty fiscal years at The Ohio State

University, Columbus Campus to explore the following research question: What is the relationship between capital improvements on the Columbus Campus of The Ohio State University and student cost?

The race for prestige typically relates to advanced funding in academic pursuits. This includes faculty recruitment and hiring that can include expensive start-up packages. Having great faculty is key for attaining the highest possible ranking, but getting the best faculty is highly competitive in many instances. Promoting faculty research and providing the necessary support for said research can prove to be expensive. Further complicating the problem, reductions in research funding and the federal government sequestration have reduced the amount of money allocated towards research grants.

The race for the most prominent ranking is not just limited to faculty and academics. In order to compete for the best students, institutions continue to build better recreation facilities, residence halls, classrooms, student unions, laboratories and libraries. These facilities look very attractive to students visiting campus and that attraction, drives competition, which creates a competition for newer and better resources within higher education. Staff has grown at a tremendously high rate to accommodate student life, to facilitate career services and to perform a variety of other tasks. Compared to faculty size, staff levels are exorbitantly large.

My hypothesis is that one of the largest drivers of cost in higher education has largely gone unnoticed and that the catalyst for price explosion has been capital improvements. The Wall Street Journal's Robert Howell refers to university campuses as "resorts" and cites facility cost as one of the main causes for the cost of higher education. Capital improvement dollars have reached a level that far surpasses previous years. These

capital dollars can be used for not only new buildings, but also for building additions and renovations, particularly at The Ohio State University, where the university is currently in the midst of financing and completing a multi-billion dollar five-year capital improvement plan.

The Ohio State University's capital improvement plan is a multi-billion dollar plan where funds are allocated towards residence hall expansion, medical center expansion and a variety of other ambitious projects. This plan began in 2010 and will meet its culmination in 2015. Prior even to this plan, the scale that capital improvement campaigns increased dramatically in the last 13 years. The Ohio State University has built the largest collegiate recreation facility in the country, along with a new student union each of which have added great capital costs to the university. Ohio State has also undergone massive on-campus residency changes by building new residence halls and renovating existing structures. The Thompson Library had a lengthy renovation that was recently completed. All of these capital expenditures have occurred over the last eight years. Over that same time period student cost has exploded. Even when inflation and average family income increases are taken into consideration, the increase is still dramatic.

In the next section I will begin my literature review, which will document research discovered around the market of higher education. Following that section I will describe the methodology and data used to test the hypothesis that there is a relationship between capital improvements and student cost at Ohio State. The next section describes the regression results, followed by an in-depth look at capital expenditures at OSU between 2010 and 2015, which is the university's Capital Plan. Finally, the paper

concludes with policy recommendations to control student costs in the future.

Literature Review

This section of the paper will discuss the implications of student debt, the market of higher education and potential drivers of cost in higher education. The cost of higher education, as has been outlined in the previous section, has dangerous consequences not just for those in debt, but also for the American economy. Individuals are being given loans that they are often unable to repay, thus creating a credit bubble. This is exactly what the Austrian Business Cycle warns against. The Austrian Business Cycle occurs when "banks expand credit well beyond their own assets and by the funds of their clients" and given the load of debt currently, students are being financed beyond their means (Ludwig Von Mises Institute, "Austrian Business Cycle"). The debt that students take on may be too large to ever be paid back. The unfortunate consequences of student debt can be mitigated with lower student cost.

Universities want rankings

In higher education, the ultimate pursuit is for high rank attainment. Rankings such as *US News and World Report*'s "America's Best Colleges" drive much of the activity in higher education today. Universities use rankings to "bolster their own professional reputation and status" and students use rankings to "make choices about where to study" (Hazelkorn, p.2). Many students make decisions on where they attend school based on the expected outcome of being educated at a certain institution. "John Maynard Keynes saw such unavoidable ignorance in investment decisions as leading to a reliance on the "animal spirits" of uninformed optimism or pessimism" (Winston, p.70), given this reliance on future gain, higher education is indeed a trust market. There are

many other benefits to ranking advancement. Hazelkorn goes on to write the following about universities, “higher education leaders believe that benefits flow directly from doing well in rankings, while a ‘poor’ showing can lead to reduction in funding or status or both” (Hazelkorn, p.2). Harvard, thought to be one of, if not the best higher education institution in the country, boasts an endowment of $30 billion (Haynie, “Harvard”). In a sense, those with resources are those that attain more and more resources. There are multiple layers of incentives associated with ranking advancement, but universities invest a great deal of time and money into the pursuit of prestige. There is no cost too high for a university to try to attract the best faculty and students, which will advance its ranking.

The formula for higher rankings can come from a variety of different metrics. According to *US News and World Report,* the site uses quality of incoming students, academic reputation, retention, faculty resources, student selectivity, financial resources of a university, graduation rate performance and alumni giving rate. The quality of incoming student has primarily to do with the class ranking of the student in high school. Academic reputation refers to essentially the prevailing beliefs of a school’s academic excellence. Retention is taken into consideration to gauge how well campus services are provided to students. Faculty resources consider the faculty to student ratio, the higher degrees that faculty members hold and faculty pay. Student selectivity is made up of student ranking within their high school class and ACT and SAT scores. The financial resources of an institution are evaluated by per student spending. Graduation rate performance looks at the predicted rate of graduation versus the actual rate of graduation. Lastly, alumni giving tracks the percentage of living alumni who donate to an institution. Based on these metrics the university’s objectives become very clear. Institutions must

not only attract, but also retain and graduate the best students. Following their graduation, alumni must then be converted to alumni that feel compelled to give back in the form of donations.

Students and faculty are often attracted by the allure of new building and services. According to Edith Behr from Moody's Investors Service's public finance group, "capital improvements are now more oriented to attracting students and faculty" (Kiley, "Attracting Students and Faculty"). In a vacuum this makes sense, an institution continues to build newer, more opulent buildings in the hope that it will attract the best and brightest students and faculty. Unfortunately, institutions that collectively have this mindset distort the market of higher education. Institutions continue to build because it benefits them, but it eliminates some of the choices that consumers (students) are able to make.

Bowen's Rule

Unfortunately, this bid for resources is a seemingly endless process and cost control is not in the prerogative of higher education institutions. According to Bowen, cost containment of higher education must come from the outside (Fried and Salam, "Bown's Rule"). Institutions now do all that they can to advance in these rankings, oftentimes at the expense of others. Bowen's Rule states the following:

1. The dominant goals of institutions are educational excellence, prestige, and influence.
2. In quest of excellence, prestige, and influence, there is virtually no limit to the amount of money an institution could spend for seemingly fruitful educational needs.

3. Each institution raises all the money it can.

4. Each institution spends all it raises.

5. The cumulative effect of the preceding four laws is toward ever increasing expenditure (Popik, "Bowen").

Bowen's Rule states that rankings and prestige are the ultimate goal of institutions and that essentially money is not a hindrance to reaching that goal. Money is then being raised either through donations, investments, monetization, tuition and fees or a number of other sources, that money is then immediately transferred to expenditures to drive ranking and prestige advancement. This rule is the prevailing theory regarding higher education economics and is widely tested. In a study conducted in 2012 entitled *Measuring Baumol and Bowen Effects in Public Research Universities*, the authors put Bowen's Rule to the test. The study analyzed costs between 1987 and 2008 and again from to 2008 and 2010. The study examined university revenues and how they are tied to expenditures under the guidelines of Bowen's Rule and the following was found, "our results demonstrate that staff/student ratios are collectively and individually significant; Bowen's rule has a significant impact on cost" (Martin and Hill, p.27).

The Market of Higher Education

The market of higher education also acts much differently than the overall market. Robert H. Frank, when referring to the contrast in the higher education market and the market-at-large, states that "especially at the high end of the market, demand exceeds supply at the stated prices--year in and year out--by an enormous margin" (Frank, p.4) For instance, a prestigious public university could receive 35,000 applicants, many of them qualified, for only 6,000 spots. This creates an anomaly in the market that allow

prices to grow with no strict market control, which occurs in the market-at-large. Demand for all universities, those that are prestigious and those expending resources to become prestigious remains relatively constant. As a result of this, universities have less incentive to keep costs down and a major incentive to increase expenditures to maximize prestige and resource capture.

This market is unique in the sense that there are many factors that offset costs in the means of production that vary greatly from institution to institution. These factors include public and private revenue inputs, "schools that get a lot of donated resources from endowments and legislatures and gifts and capital stocks can and do sell their educational services, in their commercial role, at a lower price or higher production cost and quality" (Winston, p. 123). These factors and many more are integral to the financial standing of institutions. An interesting point is that because there are so many different inputs into the market, student prices seemingly have more flexibility to be set and incidentally, institutions with the most flexibility are the ones that are able to provide a higher quality of education. In order attain further resources; an institution must first have a wealth of resources.

Capital Costs

Capital costs have been identified as one of the main factors of increased expenditures. Unfortunately, capital investments have failed to be taken into consideration in cost analysis. According to Winston, "conventional college accounting has taken little notice of the costs of using the buildings, equipment, and landscaped grounds in the production of higher education" (p. 125). Winston goes onto to state that as a result of this accounting lapse the issue of opportunity cost is not taken into

consideration, "the cost involved in using resources that could have been used elsewhere (here, the cost of tying up money in a building that could have been earning a return if it had been put into financial assets, instead)" (Winston, p.125). Not only has the accounting for capital improvements been lost, but some argue that the very nature of capital improvements to the scale that they are being conducted is wasteful. Bruce Johnstone argues that capital improvements are a "profligacy" expense "the charge of profligacy suggests unnecessary and/or overpaid faculty and staff, unnecessary capital expenditures and insufficient cost controls" (Johnstone, p.28).

We now have insight into why higher education administrators want to continue building. It affects their bottom line, through rankings. Institutions have many incentives to continue building, but very few to keep their costs in check. Collectively, the higher education market pursues policies of building in a market where competition is already greatly reduced. However, the prior literature does not connect the increasing capital improvements to the increasing total cost of attendance for students. This research begins to explore this connection.

Methodology and Data

Are capital improvements causing an increase in student cost? Using both document and quantitative analysis, I have researched this question in this paper. The quantitative data used for this paper were collected from the annual Ohio State University Operating Budget both online and in paper form from 1983 to 2013. Information on the 2010 to 2015 Capital Plan, which is highlighted further in the document analysis, was taken from various sources from the university and media. Additional information was added through my personal interaction as a member of university leadership from 2010-

2014. The following sub-sections will identify specific variables in the quantitative analysis.

Student Cost

Student cost is the dependent variable in my analysis. 'Tuition and fees' represents the information listed in The Ohio State University's Operating Budgets for undergraduates at The Ohio State University Columbus Campus. The line items within the 'Tuition and Fees' segment have included a number of fees over the course of the past thirty years at Ohio State. These line-items have included tuition, room and board, the Student Activity Fee, Recreational Sports Fee, Ohio Union Fee and various other fees at different points in time. This number is not to be confused with "total cost of attendance", which also includes the cost of books, supplies and other relevant educational costs. This variable is referred to in the paper as student cost.

Capital Improvements

This variable measures the total dollars spent on capital improvements in each year according to the Ohio State budgets. "Capital improvements" as defined in the Ohio Revised Code section 3301-92-02, to include permanent improvements, acquisitions, replacements or enhancements. (Ohio Revised Code). Acquisitions account for the purchasing of new capital. Replacement expenditures are used to replicate decrepit or otherwise unusable capital. Other than what is explicitly mentioned in the Ohio Revised Code, whenever the term "renewal" is listed, it is noted as a capital improvement. Whenever capital plans, capital improvements or capital, in terms of facilities, is mentioned, I list the expenditures as capital improvements. For the 2010-2015 Capital Plan, I allocated the cost for the project from the beginning date of the project until year

2015. Many capital improvements were grouped together with beginning and end dates in budget clusters, but those clusters often included projects listed as 'TBD'. For projects listed as 'TBD' if the cost for a project was between $1 million and $20 million, the cost for that project would be spread over the course of three years, if the cost for a project was between $20 million and $100 million, the cost would be spread over 5 years and if the project was between $100 million and $500 million, the cost would be spread over 10 years.

Revenues from Tuition and Fees

The 'Tuition and Fees' variable indicates that amount of revenues collected for the Columbus Campus of The Ohio State University from tuition and fees. The tuition includes funds from undergraduate, graduate and professional students. The fees include, but are not limited to the Student Activity Fee, college fees, the Recreational Sports Fee, the Union Fee, etc. The tuition and fee number is the median number across the university; therefore, it takes account of lab and other course fees, as well as college-specific fees.

Student Share of Instruction (SSI)

The SSI variable measures "Student Share of Instruction" funding allocated by the State of Ohio to public universities, through the biennial budgeting process to subsidize the instructional costs for in-state students. The monies listed in this paper are the line-itemed amounts allocated to The Ohio State University, Columbus Campus each year.

Health Systems

"Health System" revenue includes the revenue from all The Ohio State University

medical centers. The medical centers include the Wexner Medical Center and all university owned and operated medical centers. These medical centers are predominantly located in Central Ohio, but there are locations across the state. The different types of medical centers include urgent care centers, specialized medical providers and a number of other types of healthcare operations.

Auxiliary Revenue

The "Auxiliary Revenue" variable includes revenues from entities such as the Schottenstein Center, Fawcett Center, dining operations and other auxiliary operations. These operations are not instructionally based entities, but are owned and operated by The Ohio State University.

Private Grants and Contracts

The "Private Grants and Contracts" variable measures funds that are from "contracts with non-governmental organizations and foundations" (The Ohio State University, "Operating Budget"). These funds are allocated for both broad and specific projects.

Quantitative Results

The purpose of this paper is to examine the past thirty fiscal years of The Ohio State University as to determine if there is a relationship between student cost of instruction and capital improvement expenditures. Descriptive statistics for a number data points for the university including total government support, auxiliary revenue, tuition and fee revenue, enrollment numbers and capital improvement expenditures are provided. Followed by the results from two regression models that were conducted to test the hypothesis that there is a relationship between expenditures on capital improvements and

the cost of student instruction.

Listed below in **Table 1** are the descriptive statistics for the variables in the dataset. All figures are in thousands of 2013 real dollars. Over the years, student cost of instruction ranged between roughly $10,000 and $22,000 per year, with a mean of about $15,000. The minimum for capital improvements is $1,924,200 and the max is $587,831,40, the mean is $100,788,200.

	Observations	Mean	Std. Dev.	Min.	Max
Fiscal Year	31	1998	9.092121	1983	2013
Student cost	31	15.74161	4.177727	10.6	21.93
Tuition and Fees	31	489494.5	220149.2	241634.4	874701.3
Health Systems	31	993073.7	708463.3	315357.3	2617436
Dept. Sales and Service	31	66679.26	21496.37	36703.62	105000
Government Support	31	797064.2	94213.98	594484.8	956652.2
Private Grants	31	209888.7	110841.1	70378.27	392790.7
Capital Improvements	31	100788.2	183550.2	1924.2	587831.4
Enrollment	31	38.79903	2.59323	35.25	44.2
Auxiliary Revenue	31	219798.8	76448.02	139081	365974
SSI	31	412060.1	36109.49	332010	471589.1

Table 1: Descriptive Statistics

Figure 1 shows the relationship between capital improvement expenditures and student tuition and fee costs on a year-by-year basis from 1983-2013. As you can see in the graph there has been a significant increase in capital expenditures recently due to the FY 2010-2015 Capital Plan of the university. Student cost has also risen substantially in the last thirty years. The two data points particularly coincide in the late 1990s and early

2000s and around 2009.

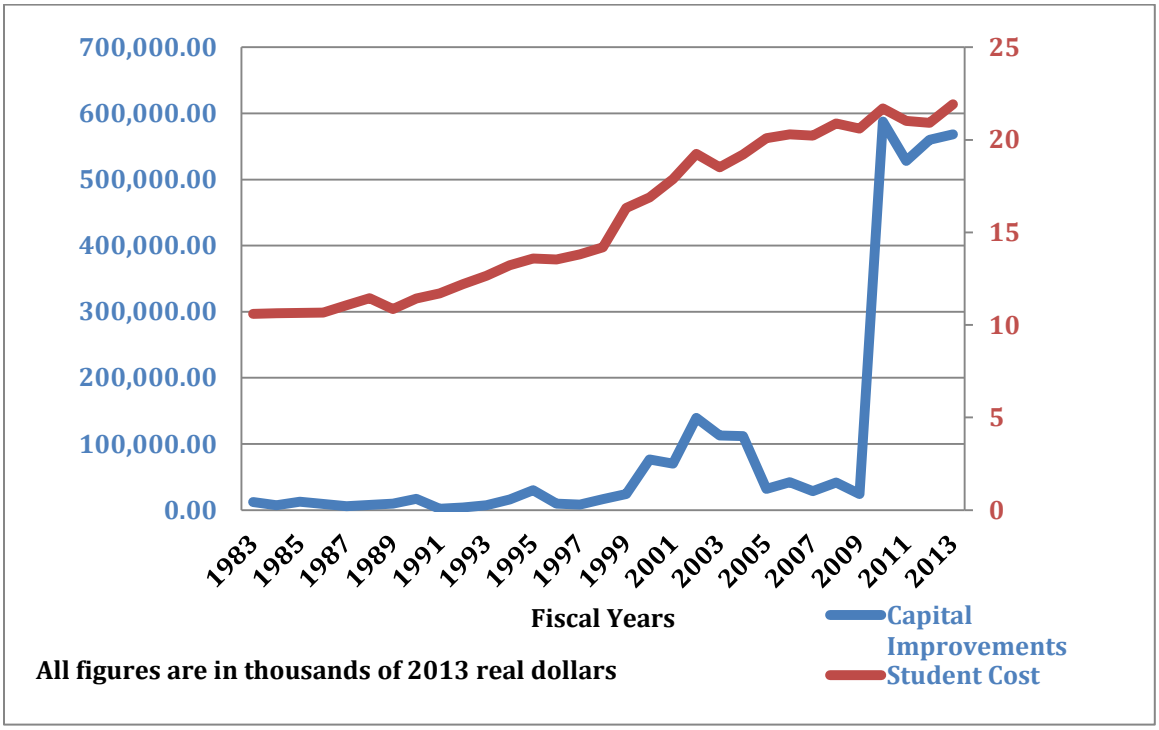

Figure 1: Capital Improvements and Student Cost at The Ohio State University from FYs 1983 -2013

A correlation matrix revealed that many of the independent variables are highly correlated with one another. To avoid multicollinearity, the model was reduced to include only four of the independent variables: capital improvements, government support, auxiliary revenues, and enrollment. The results from the Ordinary Least Squares (OLS) regression are shown in the first column of **Table 2**. A Durbin-Watson d-statistic test was done to test for serial correlation. However, the test was inconclusive. To correct for potential serial correlation the model was run again with a Prais-Winsten regression using the AR(1) method. This method corrects for serial correlation while preserving the use of all observations. The results of the Prais-Winsten regression are shown in the second column of **Table 2**.

Whether correcting for serial correlation or not, both models show similar results in terms of the sign and significance of the coefficients of the variables in the model. Of most importance to this research, the results demonstrate that capital improvements did not have a statistically significant impact on the student cost of instruction. Therefore, the hypothesis is not supported.

When examining the impact of the control variables, auxiliary revenue and enrollment are both statistically significant at the 95% confidence interval and government support is statistically significant at the 90% confidence interval. According to the results, for every thousand dollar increase in auxiliary revenues, we see a $.05 increase in student cost of instruction. For every increase in enrollment of 1,000 students, we see a $330 to $350 decrease in the student cost of instruction**.** Government support has a statistically significant, but substantively small impact on the cost of tuition and fees.

	OLS Regression Results – No Correction for Serial Correlation	GLS Regression Results – Correcting for Serial Correlation
Capital Improvements	(0.000000277)	(.000000368)
	(0.00000103)	(.00000109)
Government Support	(0.00000436)*	(.00000495)*
	(0.00000233)	(.00000249)
Auxiliary Revenues	(0.0000527)**	(.0000515)**
	(0.0000083)	(.00000409)
Enrollment	(-.3484764**	(-.3324089)**
	(.0482506)	(.0577987)
Constant	(14.17636)	(13.34335)
	(2.287644)	(2.701136)
N	(31)	(31)
Adjusted R^2	(0.9822)	(0.9750)
F (4,26)	(413.84)	(253.45)
Standard errors in parentheses		
** p<0.05, * p<0.1		

Table 2: Regression Results Predicting the Cost of Tuition and Fees at Ohio State from 1983 – 2013

Results from Document Analysis

This portion of my paper will go into various, but relevant aspects of The Ohio State University. I will focus on the financial state of higher education nationwide and how that has led to a great deal of diversification of resources at Ohio State. I will also discuss the fiscal state of the State of Ohio and how that has led to budget reductions. Following this, I will explore a few of the financial decisions that Ohio State has recently made. Finally I will analyze the recent OSU Capital Plan and other capital improvements that have occurred recently.

The State of Higher Education

Following The Great Recession, higher education institutions began to see many

of their funding sources begin to come to an end. One of the most notable reductions of funds has been from state governments. According to Clark, the University of Maryland reduced its support of public higher education institutions by $48 million and California's cuts to higher education forced tuition increases of $2,500 (Clark, "The Great Recession"). Government entities across the country are coping with decreased tax revenues and a need for additional government services. In many instances, higher education is a service that could be cut without major consequences, "the reasons for the decline in share [of state expenditures] can be found in the nature of the competition for state funds, the growth of other state services, political priorities, and the perceptions of key state officials" (Callan, p.3).

Ohio

Ohio was one of the states that was hit hardest by The Great Recession. The job loss in Ohio was incredible; "From the end of 2007 until the end of 2009, Ohio lost over 400,000 nonfarm payroll jobs" (Hall and Greene). Many of these jobs were manufacturing and auto jobs, the bread and butter of Ohio's economy. Governor Strickland put forth plans using federal stimulus monies for heavy investments in state government programs. This included his K-12 funding formula which increased the state investment in education greatly, higher education, infrastructure and many more projects as found on recovery.ohio.gov. Strickland used one-time funds for projects that would require on-going funding. Once Governor Kasich was elected into office, there was an $8 billion budget shortfall. Ohio is a state with a constitutional requirement of a balanced budget (Luhby). Additional revenue could have been collected, but that was not politically feasible at the time, therefore cuts were made.

In the State of Ohio, there are 16 public higher education institutions that are supported financially by the state. Much of the monies allocated to these universities are in the form of the State Share of Instruction or SSI funding. SSI funding is tuition subsidization for in-state students attending an Ohio public institution. These funds are to create a lower cost of instruction for in-state students and are to bridge the gap between the in-state tuition price and the actual cost of education. Once these monies are allocated to an institution, they are to be used for educational purposes. Educational purposes include funding of faculty and staff, college operational costs and classroom supplies; this would not include funding for athletics or other non-academic entities at Ohio State. Up until 2013, these funds were allocated purely based on institutional enrollment. However following the passage of the 2014-2015 Biennium Budget, allocation is now based on the institution's graduation rate as well (Siegel). The State Share of Instruction revenue streams were a prime target to be trimmed in the 2012-2013 State of Ohio Biennial Budget, in 2011 Ohio State received $390,830,000 in SSI funding.

From 2009-2011 there was $8.2 billion provided to Ohio through the American Recovery and Reinvestment Act (Ghose, "American Recovery"). The additional federal stimulus monies had been exhausted by 2011. As a result, the total allocation of SSI dollars around the state was cut. To make up for some of this reduction, the state actually increased its commitment by 2.7% in 2012 and 0.9% in 2013, but the total sum of the allocation remained lower (Board of Regents, p.1). The Ohio State University saw its SSI line-item decrease 15.6% to $329,548, which is around a $61 million cut, public universities in Ohio saw an average budget decrease of 13% between 2011 and 2012 (Farkas, "Ohio Higher Ed Cuts").

SSI funding serves a unique role in budgeting at Ohio State. SSI funding is not treated the same way as say room and board or auxiliary revenue would be treated. SSI funding, when collected from the state, is transferred to a college within Ohio State. SSI funding truly is a subsidization of the cost of instruction for in-state students because their SSI dollars follow them to the college that a student chooses to attend at Ohio State. The impact on SSI funding changes is not necessarily immediate however. Tuition increases are primarily based on budgetary forecasts and the fiscal health of the individual colleges, therefore a reduction or an increase in SSI funding would not immediately spur a tuition increase or freeze, but it certainly is a major factor contributing to the overall cost of tuition.

State Capital Budget

In Ohio, the governor proposes a state capital budget to target certain capital needs for the state. According to the Ohio Office of Budget Management the State Capital Budget, "provides appropriations for the repair, reconstruction and construction of capital assets of state agencies, colleges, universities and school districts" (Office of Budget Management, "State Capital Budget"). The state finances these projects through debt issued by the state. This allows entities receiving capital funding more flexibility in their budgets through state assistance. The 2015-2016 state capital budget totaled $2.4 billion, including $83 million for The Ohio State University. Although money allocated from the state are not included in the total number of capital improvement dollars listed in this paper, the allocation of state monies directly to campus capital projects is significant to mention due to the large sum of investment by the state.

Ohio State Reacts

Ohio State, after facing a major budget reduction, also had its tuition increase capped at 3.5% for in-state students. This cap was put in place for all Ohio public schools and was instituted in the 2012-2013 biennial budget; for the 2011-2012 school year, Ohio State raised tuition 3.5%. Many leaders of Senior Management Council, the university's leadership team, began to plot a new fiscal course for Ohio State following these reductions and restrictions. New, more reliable revenue sources needed to replace declining state funding. Many of the changes piloted by Ohio State were new in higher education. These included selling century bonds and privatizing parking.

Parking

The most controversial maneuver to procure additional funds was the privatization of the university's parking operation. In the fall of 2011, Ohio State first explored the option of leasing parking. An analysis conducted by JP Morgan Chase, Ohio State's parking operation was valued at $380 million. Under this analysis, the parking operation would be leased for 50 years. Following this valuation the university leased its parking operation for $483 million beginning in June of 2012. This was a one-time, up-front payment that was directly placed in the university's endowment. The sum of funds from parking went into investments in student scholarships, faculty hires, support for the arts and humanities and also core transportation operational costs on campus. The agreement allows for a 5.5% annual increase on the cost of parking permits, a cost that is transferred to students, faculty and staff who park at Ohio State.

Century Bonds

In 2011, The Ohio State University became the first public university to issue century bonds. The university sold $500 million worth of 100 year bonds. These bonds

"bear interest at a nominal rate of 4.8%—priced at a slight discount to par to yield 4.849%, according to a person familiar with the sale. That is equivalent to 1.70 percentage points over 30-year Treasury rates" (Burne, "Century Bonds"). The sale of the century bonds will be used to finance part of the university's Capital Plan. The Capital Plan, which will be explained further, has a total budget of $2 billion.

The Framework Plan

The Ohio State University created a strategic plan to lay out the future of the physical environment on the Columbus Campus. Paired with Sasaki Associates, a notable consulting architecture firm, Ohio State released the Framework Plan in 2010. Ron Ratner, the lead OSU Board of Trustee member on the project said the following about the plan, "It's an arbiter around which you can maintain a set of core principles about how we look at the campus, how we organize the buildings, how we look at the built environment— not just the buildings, but the spaces in between them, the connective tissue of the transportation aspects and sustainability" (Beasley, "Framework"). The Framework Plan is a comprehensive vision of the physical environment of Ohio State that set the basis for the university's Capital Plan.

2010-2015 Capital Plan

The Ohio State University 2010-2015 Capital Plan outlines a five-year period of investments into physical projects around campus. As stated earlier, some of the funds for the plan come from the issuing of century bonds by Ohio State. The plan is multifaceted in the sense that it covers investments to the academic core of the university, residence halls and the medical center. Former Ohio State Chief Financial Officer Geoff Chatas told the Wall Street Journal that the Capital Plan had "also been funded with a mixture of

donations and $900 million in other debt issues. Of that $900 million in related borrowings, about $700 million was done in Build America Bonds, which are taxable but give the university a rebate from the government to help pay its interest costs, and $200 million was floating-rate tax-exempt debt" (Burne, "Bonds"). The plan is as follows:

Previous Commitments	$190,000
Chemical & Biomolecular Eng. & Chemistry	$138,000
Sullivant, Smith, Cunz renovations	$34,000
Hospital Tower & Associated Projects	$1,100,000
South Campus High Rise Renovation	$172,000
Hall Complex & Enabling	$62,000
Medical Center Expansion & South Campus High Rise	$173,000
North Academic Core Support	$70,000
North Campus Dorms	$370,000
Other Projects	$89,000
Total	**$2,398,000**

Table 3: The Ohio State University's Capital Plan for FYs 2010-2015 in Thousands of Dollars

The Capital Plan is exclusively for the Columbus Campus of The Ohio State University and totals $2.398 billion in renovations and new buildings. The largest project of the plan is the new medical center tower, which totals $1.1 billion in cost, $100 million of the cost of this project was donated by Les Wexner (Hoffman, "Wexner"). This tower is 21 stories tall and will allow the hospital to serve an additional 10,000 patients (HOK). The renovations to Sullivant, Smith and Cunz Halls are the smallest projects of the plan and total $34 million, of which $6 million of the renovations were paid for through donations. Sullivant Hall has been transformed to be the home of the dance department and received a redesign.

Totaling nearly $1.3 billion dollars in capital investment, it is clear that the

Wexner Medical Center is a priority for the university. The projects included in the medical center capital investment include the Hospital Tower and Associated Projects and the Medical Center Expansion and South Campus High Rise. All of these projects are medical center ones. The goal behind the medical center expansion is to in an attempt to diversify Ohio State's revenue streams. The data collected for this paper supports that there has been a tremendous growth in revenue in Ohio State's health systems. From 2003 to 2013, adjusting for inflation, health system's revenue has more than doubled. The 2013-projected revenue of $2.6 billion nearly makes up half of the university's total operating budget. Protecting and growing this revenue is a key priority for the university. Ohio State's 2013-2014 Operating Budget indicates that expenses for the health systems are expected to increase by 4.3% following implementation of the Affordable Care Act. The uncertainty in health services was cited as rationale for a push to increase growth in the health systems (Ohio State University, p. 29). The capital investments made to health systems will allow the university to offer additional and more specialized services to increase revenue. One specific facility is the new James Cancer Hospital, which is designed to bring high-quality cancer care to Central Ohio. Specialized care and expanded facilities will also help the medical center enhance its reputation as a medical center and allow medical students an exemplary education.

The North Campus Dorms project, a $370 million investment, was created to facilitate the requirement to have second-year students live on-campus. Beginning in 2016, sophomores attending Ohio State will be required to live on-campus for their second-year as opposed to having the option of living off-campus. The Second-year Transformational Experience Program (STEP) will be the co-curricular piece of the

second-year live on requirements. STEP pairs each second-year with a faculty mentor that guides the student through either an experience or a project that he or she chooses to participate in for the program. At the university's currently occupancy capacity, the residence halls would be unable to facilitate the space required for a second-year live on. The $370 million debt was financed by 10-year bonds and is expected to be paid off with roughly 5% annual increases to room and board over the next ten years. The renovations to south campus residence halls were an update to the state of the buildings, while also expanding occupancy in anticipation of the impending second-year live on requirement.

The university has pledged to create exemplary academic units and faculty workspaces as an effort to improve the academic reputation of the university. As was stated in the literature review of this paper, the faculties ranking and prestige-level are key factors in university rankings. The University's Framework Plan states the following as rationale for the academic capital improvements "A compact core is more efficient and sustainable, with a smaller carbon footprint and minimized infrastructure needs" (Sazaki, p.17). This core referred to is in reference academic center of the university. These academic facilities will replace old facilities and repair and upgrade existing facilities. One example of this is the Chemical and Biomedical Engineering and Chemistry (CBEC) building which "will create laboratory space with the proper floor-to-floor height, structural dimensions, and environmental stability to support intensive research" (Ohio State University). The project cost is for the new CBEC building $126 million, $17 million of the cost was donated by the Lowrie family.

The Ohio State University Capital Plan is an incredibly complex plan that creates new and revives old priorities for Ohio State. President Emeritus Gee often stated that if a

campus is not involved in construction that it is dying. During his time at Ohio State, it was evident that Gee took this belief to heart. Ohio State's campus has been covered with construction for the past four years and it is the belief of the university that additional building will secure its financial future. The improvements that have been funded all are anticipated to provide Ohio State additional monies whether through research dollars, increased revenue from the medical center or through revenues from room and board now that second-year students will be required to live on-campus. Renovations to arts and humanities facilities have largely been passed over for funding. For instance, President Gee referred to Hughes Hall as "scary" in 2011, but no large-scale renovation to that space has occurred (Bradley and Antonetz, "Hughes Hall").

Data collected shows that the spending on capital improvements through the OSU Capital Plan is unparalleled at Ohio State. Even with annual capital expenditures adjusted for inflation, the next highest four-year spending period in the last thirty years totals $434 million, which occurred from FY 2001-2004. From FY 2010-2013 $2.2 billion was spent on capital improvements. The first few years of the capital plan is more than five times more costly than any other comparable period of time in the last thirty years at Ohio State.

Conclusion

This policy issue has great implications for student cost and university expenditures for years to come. This paper sought to examine the relationship, or lack thereof, between student cost and capital expenditures at The Ohio State University Columbus Campus. The results of this paper combine both document analysis and quantitative research to come to a conclusion. In conclusion it is clear that there was no

statistical significance tied between student cost and capital improvement expenditures. One possible reason for this finding was poor timing in regards to showing the statistical significance between capital improvement expenditures and student cost increase. Capital improvement expenditures have increased greatly in the last three years due to the Ohio State Capital Plan and the cost transfer to students may have not yet occurred in the degree that it will in coming years. For instance, the north campus residence hall expansion will be financed purely by an increase in room and board, but these costs have not been fully realized, and are therefore not captured in the data. The imposition of the second-year live on requirement will undoubtedly require additional services to accommodate the increased amount of students living on campus. Recreational sports, which is financed directly by a fee that could increase to adapt to the increased number of students utilizing its facilities for example due to the increase of students living on-campus as a result of the second-year live on requirement. Additional expenditures in residence life staff, student counseling and dining services will all have to be adjusted for the influx of students that will be living on-campus. This will most certainly equate to a cost increase to students and from the new facility.

There was statistical significance within the 95% confidence interval in enrollment and auxiliary revenue and the dependent variable, student cost. Auxiliary services at Ohio State include the Schottenstein Center, Fawcett Center and other non-academic operations. Staffing levels at Ohio State have grown by a large amount and currently staffing levels are higher than faculty employment, this is partly due to the expansion of various auxiliary operations. Auxiliary revenue also includes dining and residence hall operations, which make up the room and board cost. The statistical

significance of auxiliary operations shows a link between staffing size, room and board price and student cost.

The enrollment increase and auxiliary revenue relationships are important in answering the research question posed in this paper. As enrollment is set to increase per the university Enrollment Plan, it is likely that student cost will decrease as a result. The increasing number of students will decrease costs until classrooms become too full and additional sections of classes need to be offered, resulting in more professors, this could be explained by the economy of scale. There will be a point in the future where the number of students that are enrolled at Ohio State -- Columbus hits a ceiling where it is no longer advantageous to expand in the way the university strategizes in its current model. If there comes a point where Columbus Campus is unable to expand any further, regional campuses may see increased investments to expand themselves.

Government support was very nearly statistically significant in the 95% confidence interval, but was safely within the 90% threshold. As noted in the literature review and document analysis, government support or lack thereof is often listed as a determining factor for setting student prices. The data confirm that Ohio State has recently seen cuts in government funding and periods of student cost increases have followed. The most significant state budget cut that Ohio State endured in the thirty years examined in this paper was when SSI funding was cut by $61 million between 2011 and 2012. This cut of funding was used as justification for many of the financial decisions that were made. The best example is the leasing of the university's parking operation, which was an incredibly contentious issue. The university justified the privatization of parking because the state government had slashed the its budget and needed to add

additional revenue streams. However, the $61million cut, although substantial, was minimal for an institution with an annual operating budget of well over $7 billion. Cuts in government spending give license for the university to cast the blame over tuition increases to the state government and are able to still increase total revenue. It is clear there is a relationship between the two variables, but the story is much more complex.

The Ohio State University is on path to be an excellent university. In fact, Ohio State is attempting to go from excellent to eminence, which has been a motto of sorts for the university over the last few years. This translates to a desire for an increase in rankings and prestige. There are many examples of how Ohio State is doing this, but for the sake of brevity I will list three. This formula for ranking advancement includes new residence hall facilities, which Ohio State is aggressively pursuing. Expanded student life offerings that will increase the quality of student life on campus, can be seen in the new recreational facilities, the new Ohio Union and in a number of other facilities and programmatic offerings at Ohio State. Another major component of ranking advancement is academic reputation and prestige. Pursuit of academic prestige was the primary justification for the second-year live on requirement that the university will begin in 2016. Unfortunately all three of these pieces directly result in capital expenditures. The Union and new residence halls directly result in student fees and increases that are literally put in place to fund brick and mortar costs.

It is clear that Ohio State has made advancement in rankings. *US News and World Reports* currently ranks Ohio State 52nd out of universities in the United States in 2014, Ohio State ranked 53th overall in 2010 and 56th in 2009. This is a noteworthy improvement compared to 2004 when Ohio State was ranked 62nd in the nation. Ohio

State's first-year retention rate has grown from 88 percent in 2003 to 92.4 percent in 2012 (The Ohio State University, "Retention Rates"). If the university's goal was to increase rankings with many of these expenditures, it has been successful (The Ohio State University, "OSU Climbs"). This paper's goal was not to address the validity of a rankings increase as a result of these decisions, but rather the consequences of those decisions.

Policy Recommendations

The data presented in this paper shows that Ohio State is making bold decisions in challenging times for higher education. Decisions such as the Capital Plan, second-year live on, medical center expansion and privatization of parking have all been made or executed in the last four years. Any one of these changes alone could cause enough instability to greatly affect an institution, but it is disconcerting that all of these alterations are happening so closely together. The amount of money that is involved in these plans is staggering, even with an institution that is as large as Ohio State. Based on the data presented in this paper, the following are my recommendations for Ohio State.

Be a steward of the university

Ensure that the financial commitments that have been laid out are being met without substantial impact to student cost. The university has well over $2 billion allocated in capital projects in just a five-year period and this requires a great deal of financing that could result in long-term debt. The debt that the university incurs must be managed properly to ensure institutional health and to allow liquidity for new investments. These new investments could include new faculty hires, financial aid or other expenditures in potential university priorities. There is concern that if these finances

are not properly managed that student cost could increase to makeup the portion lost by the university on debt servicing.

Slow down

There has been a tremendous amount of change at the university recently and the university must take time to stabilize and see the new vision of the university through. On top of the large scale physical change to the university, Ohio State recently switched from quarters-to-semesters. This transition has changed the timing, rhythm and culture of the university in a meaningful way. In just a few years, second-year students will be required to live on-campus as well. Each one of these changes create a great deal of instability, but combined they could create true administrative difficulties. With these new policies come major financial implications. The new payment periods for the semester calendar and bond and programming costs attached to the second-year live on are fiscal obstacles that could prove difficult to manage, thus affecting student cost.

Continue to diversify revenue streams

It is clear that cuts in government funding, research and other streams have and will continue to occur. The university has financial diversified a great deal recently and I believe that that should continue in order to not pass cost on to students. Efforts in monetization and affinity agreements have added greatly to the university's endowment and have allowed the university to invest in crucial strategy interests, such as the hiring of strategic faculty areas. The university must try innovative financial tactics to continue to grow.

Reinvest in People

There has been an overinvestment in facilities at Ohio State, particularly with the

Capital Plan, now is the time to turn focus back to the people of Ohio State. Invest in attracting the best and brightest faculty that will enrich education at Ohio State. The core mission of the university is to educate the people of the State of Ohio and Ohio State must not forget that mission. This also means that Ohio State has a commitment to keeping student debt load low. New scholarship investments are required in order to maintain and grow the access mission that Ohio State, as a Land Grant institution, possesses.

Limitations of Research

This paper was a case study on The Ohio State University, Columbus Campus because there were not enough comparable data that were readily available to conduct a broader study on capital improvements and student cost. The results from this paper cannot, therefore are not generalizable to other institutions across the country. If there was a longer timeframe available for data to be collected the statistical significance of capital improvements and student cost might be stronger. For instance, the costs associated with the north campus residence hall expansion will not affect room and board costs until at least 2016, when the second-year live on is enforced. Finally, in this paper the perspective of university administrators and senior leaders is more vacant than I would like it to be.

Future Research

Further research is needed to explore the relationship between university capital improvements and student costs. If research is to be done further on this topic there would need to be time-series cross sectional data in order for greater external generalizability. That way the research will have a broader and more applicable approach.

Any future research centered on this topic should provide at least a decade for the costs associated with the 2010-2015 Capital Plan to affect student cost in a larger degree. Future research should also include interviews with senior level university officials that would provide their perspective on the issue of student cost, capital improvement expenditures, university budgeting practices, priorities and the 2010-2015 Capital Plan.

Citations

- "Austrian Business Cycle Theory ." *Ludwig von Mises Institute* . N.p., 16 Oct. 2013 . Web. 5 Dec. 2013. Path: http://mises.org/.
- Beasley, Bob. "A Framework for Success." *Ohio State Alumni Association*. The Ohio State University , n.d. Web. 4 Apr. 2014. <http://www.ohiostatealumni.org/media/Pages/Framework.aspx>.
- Bradley, Thomas, and Alexx Antonetz. "$2M to tun OSU's Hughes Hall ." *The Lantern*. The Lantern , 22 Oct. 2011. Web. 4 Apr. 2014. <http://thelantern.com/2011/10/2m-to-tune-ohio-states-hughes-hall/>.
- Burne, Katy. "The Ohio State University Prices Century Bonds ." *The Wall Street Journal* . N.p., 19 Oct. 2011. Web. 28 Mar. 2014. <http://online.wsj.com/news/articles/SB10001424052970203752604576641693067078706>.
- Callan, Patrick M. "Coping with Recessions ." The National Center for Public Policy and Higher Education , Feb. 2002. Web. 3 Apr. 2014.
- "CBEC ." *Chemical Biomedical Engineering and Chemistry Department*. Ohio State University , n.d. Web. 4 Apr. 2014. <https://cbe.osu.edu/department/cbec>.
- Chopra, Rohit. "Student Debt Swells, Federal Loans Now Top One Trillion." *ConsumerFinance.gov*. Consumer Financial Protection Bureau, 17 July 2013. Web. 7 Apr. 2014. <http://www.consumerfinance.gov/newsroom/student-debt-

swells-federal-loans-now-top-a-trillion/>.

- Clark, Kim. "The Great Recessions Toll on Higher Education." *US News and World Reports*. N.p., 10 Sept. 2010. Web. 28 Mar. 2014. <http://www.usnews.com/education/articles/2010/09/10/the-great-recessions-toll-on-higher-education?page=3>.
- Denhart, Chris. *Forbes*. Forbes, 7 Aug. 2013. Web. 17 Oct. 2013. <http://www.forbes.com/sites/specialfeatures/2013/08/07/how-the-college-debt-is-crippling-students-parents-and-the-economy/>.http://online.wsj.com/article/SB10001424052702304561004579135293814151928.html
- Farkas, Karen. "Ohio universities cutting budgets to offset funding decline due to loss of stimulus funds." *Cleveland.com*. Cleveland Plain Dealer , 8 Apr. 2011. Web. 28 Mar. 2014. <http://blog.cleveland.com/metro/2011/04/state_universities_cutting_bud.html>.
- Fried, Vance H., and Reihan Salam. "The College Cartel ." *The National Review* . N.p., 19 Mar. 2012. Web. 6 Dec. 2013. <http://www.ticas.org/pub_view.php?idx=864>.
- Ghose, Carrie. "Ohio State students, paying higher tuition, key to filling budget cuts ." *Columbus Business First* . N.p., 8 Apr. 2011. Web. 28 Mar. 2014. <http://www.bizjournals.com/columbus/print-edition/2011/04/08/more-osu-students-paying-higher.html?page=all>.
- Hall, Keith, and Robert Greene. "Beyond Unemployment ." *Mercatus Center* . George Mason University , 9 May 2013 . Web. 28 Mar. 2014.

<http://mercatus.org/publication/beyond-unemployment-full-labor-market-picture-ohio>.

- Haynie, Devon. *Universities With the Largest Financial Endowments*. US News & World Report , 1 Oct. 2013. Web. 24 Dec. 2013. <http://www.usnews.com/education/best-colleges/the-short-list-college/articles/2013/10/01/universities-with-the-largest-financial-endowments-colleges-with-the-largest-financial-endowments>.
- Hazelkorn, Ellen. "How Rankings Are Reshaping Higher Education." Dublin Institute of Technology, 1 Jan. 2013. *GoogleScholar* . Web. 24 Dec. 2013. <http://arrow.dit.ie/cgi/viewcontent.cgi?article=1023&context=cserbk&sei-redir=1&referer=http%3A%2F%2Fscholar.google.com%2Fscholar%3Fhl%3Den%26q%3Dhigher%2Beducation%2Brankings%2B%26btnG%3D%26as_sdt%3D>.
- "Higher Education: The Ultimate Winner-Take-All Market? ." *Cornell Higher Education Research Institute*. Ed. Robert H. Franks. Cornell University , 27 Sept. 1999. *GoogleScholar* . Web. 5 Dec. 2013. <http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1001&context=cheri>.Hoffman, Shelly. "Wexner, Limited Brands Foundation, make historic $100 million commitment to Ohio State." *The Ohio State University Communications* . The Ohio State University , 16 Feb. 2011. Web. 4 Apr. 2014. <http://www.osu.edu/news/newsitem3015>.
- Johnstone, Bruce. *Higher Education and Those "Out-of-Control" Costs* . National Center for Educational Statistics, Dec. 2001.*Google Scholar* . Web. 14 Jan. 2014.

<http://nces.ed.gov/pubs2002/2002158.pdf#page=113>.

- Kiley, Kevin. "The Other Debt Crisis." *Inside Higher Education* . N.p., 10 Apr. 2012. Web. 5 Dec. 2013.<http://www.nationalreview.com/articles/293763/college-cartel-vance-h-fried/page/0/2>.
- "Lowrie Family Donates $17 million to Ohio State Engineering." *Ohio State University Department of Engineering* . Ohio State University , 6 Feb. 2009. Web. 4 Apr. 2014. <http://engineering.osu.edu/news/2009/02/lowrie-family-donates-17-million-ohio-state-engineering>.
- Luhby, Tami. "Governor Kasich slashes $8B from budget." CNN.com , 15 Mar. 2011. Web. 3 Apr. 2014. <http://money.cnn.com/2011/03/15/news/economy/ohio_kasich_budget/>.
- Macchiarola, Michael C., and Arun Abraham. "Options for Student Borrowers: A Derivatives-Based Proposal to Protect Students and Control Debt-Fueled Inflation in the Higher Education Market ." *HeinOnline*. Cornell University , 2011.*GoogleScholar* . Web. 5 Dec. 2013. <http://www.lawschool.cornell.edu/research/JLPP/upload/CJP102-Macchiarola-Abraham-2.pdf>.
- Martin, Robert E., and R. C. Hill. *Measuring Baumol and Bowen Effects in Public Research Universities*. N.p., 29 Dec. 2012. Web. 14 Jan. 2014. <http://www.pdx.edu/sites/www.pdx.edu.econ/files/Measuring_Baumol_and_Bowen_Effects_in_Public_Research_Universities__NewDataFinal.pdf>.
- Morse, Robert, and Sam Flanigan. "How U.S. New Calculated the 2014 College

Rankings ." *US News and World Report*. US News & World Report , n.d. Web. 28 Jan. 2014. <http://www.usnews.com/education/best-colleges/articles/2013/09/09/how-us-news-calculated-the-2014-best-colleges-rankings?page=2>.

- Murray, Amy. "Ohio State Climbs in Latest US News Rankings ." *News Room*. The Ohio State University , 20 Aug. 2009. Web. 16 Apr. 2014. <http://www.osu.edu/news/newsitem2505>.
- "The Ohio State University Framework Plan." *Ohio State FOD* . The Ohio State University , Aug. 2010. Web. 4 Apr. 2014. <http://fod.osu.edu/afp/framework.pdf>.
- "Ohio State University Operating Budget 2013-2014." *Ohio State University Office of Budget and Finance* . The Ohio State University , n.d. Web. 4 Feb. 2014. <http://www.rpia.ohio-state.edu/cfb/docs/2013-14%20Total%20Operating%20Budget.pdf>.
- "The One University Enrollment Plan ." *The Ohio State University Office of Academic Affairs* . The Ohio State University , n.d. Web. 13 Apr. 2014. <http://oaa.osu.edu/assets/files/caa/EnrollmentPlan2012FinVersion.pdf>.
- "Ohio State University Wexner Medical Center Expansion ." *HOK Design* . HOK , n.d. Web. 4 Apr. 2014. <http://www.hok.com/design/type/healthcare/wexner-medical-center/>.
- Popik, Barry. "Bowen's Rule ." *The Big Apple* . N.p., 5 Dec. 2012 . Web. 8 Dec. 2013. <http://www.barrypopik.com/index.php/new_york_city/entry/bowens_rule>.

- "Retention and Graduation Rates for New Freshmen." *Ohio State University Enrollment Services* . The Ohio State University , n.d. Web. 29 Apr. 2014. <http://oesar.osu.edu/pdf/grad_rates/RETENTION_SUMMARY.pdf>.
- Siegel, Jim. "Colleges: tie state aid to grad rate ." *The Columbus Dispatch* . Columbus Dispatch , 1 Dec. 2012. Web. 3 Apr. 2014. <http://www.dispatch.com/content/stories/local/2012/12/01/colleges-tie-state-aid-to-grad-rate.html>.
- Siegel, Jim. "$2.4 billion capital budget set for Kasich's signature ." *The Columbus Dispatch* . The Columbus Dispatch , 2 Apr. 2014. Web. 6 Apr. 2014. <http://www.dispatch.com/content/stories/local/2014/04/01/capital-budget-passes.html>.
- "State Capital Budget Overview ." *Office of Budget Management* . State of Ohio , n.d. Web. 6 Apr. 2014. <http://obm.ohio.gov/sectionpages/budget/capital.aspx>.
- *State of Ohio American Recovery and Reinvestment Act*. State of Ohio , n.d. Web. 3 Apr. 2014. <http://www.recovery.ohio.gov/>.
- "State Share of Instruction Funding FY 2012-2013 ." *Ohio State Board of Regents* . State of Ohio , n.d. Web. 3 Apr. 2014. <http://regents.ohio.gov/financial/selected_budget_detail/operating_budget_1213/fy_2012_13_ssi-release.pdf>.
- "Student Debt and the Class of 2011." *Institute for College Access and Success*. Institute for College Access and Success, 18 Oct. 2012 . Web. 7 Apr. 2014.
- "What's Driving College Costs Higher ." *National Public Radio*. National Public Radio, 26 June 2012. Web. 17 Oct. 2013.

<http://www.npr.org/2012/06/26/155766786/whats-driving-college-costs-higher>.

- "Why Does College Cost So Much ." *The Wall Street Journal* . Wall Street Journal , 14 Oct. 2013. Web. 17 Oct. 2013. <http://online.wsj.com/article/SB10001424052702304561004579135293814151928.html>.
- Winston, Gordon. *National Center for Educational Statistics* . N.p., n.d. *Google Scholar* . Web. 14 Jan. 2014. <http://nces.ed.gov/pubs2002/2002158.pdf#page=113>.